1250 Peterson Dr., Wheeling, IL 60090

Company: Motorola
Model Tested: 5200AP, 5200SM, 5200BH
Report Number: 11344

FCC Rules and Regulations / Unintentional Radiators

Class B Digital Devices

Part 15, Subpart B, Sections 15.107a

THE FOLLOWING **''MEETS''** THE ABOVE TEST SPECIFICATION

Formal Name:	Canopy 5200 AL
Kind of Equipment:	Wireless Digital FSK Transceiver with integral antenna.
Test Configuration:	The Canopy Radio (AP/SM/BH) is connected to a 24V power supply via shielded ethernet cable. (Tested at 120 vac, 60 Hz)
Model Number(s):	5200xx
Model(s) Tested:	5200AP, 5200SM, 5200BH
Serial Number(s):	0A003E01130D
Date of Tests:	April 8, 2005
Test Conducted For:	Motorola 1299 E. Algonquin Road Schaumburg, Il 60196

NOTICE: "This report must not be used by the client to claim product endorsement by NVLAP, NIST, or any agency of the U.S. Government". Please see the "Additional Description of Equipment Under Test" page listed inside of this report. This report must not be reproduced (except in full), without the approval of D.L.S. Electronic Systems.

1250 Peterson Dr., Wheeling, IL 60090

Company: Motorola
Model Tested: 5200AP, 5200SM, 5200BH
Report Number: 11344

SIGNATURE PAGE

Report By:

Arnom C. Rowe
Test Engineer
EMC-001375-NE

Reviewed By:

William Stumpf
OATS Manager

Approved By:

Brian Mattson
General Manager

Company Official:

Motorola

1250 Peterson Dr., Wheeling, IL 60090

Company: Motorola
Model Tested: 5200AP, 5200SM, 5200BH
Report Number: 11344

United States Department of Commerce
National Institute of Standards and Technology

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ISO 9002:1994

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WHEELING, IL

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1250 Peterson Drive
Wheeling, IL 60090-6454
Mr. Brian J. Mattson
Phone: 847-537-6400 Fax: 847-537-6488
E-Mail: bmattson@dlsemc.com
URL: http://www.dlsemc.com

NVLAP Code	*Designation / Description*
Emissions Test Methods:	
12/160D21	RTCA/DO-160D (1997): Environmental Conditions and Test Procedures for Airborne Equipment - Section 21 - Emission of Radio Frequency Energy
12/300220a	EN 300 220-1 V1.3.1 (2000-09): Electromagnetic compatibility and Radio spectrum Matters; Short Range Devices; Radio equipment to be used in the 25 MHz to 1000 MHz frequency range with power levels ranging up to 500 mW; Part 1: Technical characteristics and test methods
12/300386a	EN 300 386 V.1.2.1: Electromagnetic compatibility and radio spectrum matter (ERM); Telecommunication network equipment; Electromagnetic compatibility (EMC) requirements
12/C63.17	ANSI C63.17-1998: American National Standard for Methods of Measurement of the Electromagnetic and Operational Compatibility of Unlicensed Personal Communications Services (UPCS) Devices

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NVLAP Code	*Designation / Description*
12/C6317a	ANSI C63.17-1998: American National Standard for Methods of Measurement of the Electromagnetic and Operational Compatibility of Unlicensed Personal Communications Services (UPCS) Devices
12/CIS11	IEC/CISPR 11 + A1 (1997), EN 55011 (1998), AS/NZS CISPR 11 (2002), and CNS 13803 (1997): Limits and Methods of Measurement of Electromagnetic Disturbance Characteristics of Industrial, Scientific, and Medical Radio-Frequency Equipment
12/CIS13	IEC/CISPR 13 (2001-04), EN 55013 (2001), AS/NZS CISPR 13 (2003), and CNS 13439 (2001): Sound and television broadcast receivers and associated equipment - Radio disturbance characteristics - Limits and methods of measurement
12/CIS14	CISPR 14-1 (March 30, 2000): Limits and Methods of Measurement of Radio interference Characteristics of Household Electrical Appliances, Portable Tools and Similiar Electrical Apparatus - Part 1: Emissions
12/CIS14a	EN 55014-1 (1993), A1 (1997), A2 (1999):
12/CIS14d	IEC/CISPR 14-1 (2001) and A1 (2001): Electromagnetic Compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1: Emissions
12/CIS14e	EN 55014-1 (2001) and A1 (2001): Electromagnetic Compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1: Emission

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12/CIS14f	AS/NZS 1044 (2001) and A1 (2001): Electromagnetic Compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1: Emission
12/CIS14g	CNS 13783-1 (2001) and A1 (2001): Electromagnetic Compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1: Emission
12/CIS15	IEC/CISPR 15 (2000) + A1 (2001): Limits and methods of measurements of radio disturbance characteristics of electrical lighting and similar equipment
12/CIS15a	AS/NZS CISPR 15 (2002): Limits and methods of measurements of radio disturbance characteristics of electrical lighting and similar equipment
12/CIS15b	CNS 13439 (2000) + A1 (2001): Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment
12/CIS15c	EN 55015 (2000) + A1 (2001): Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment
12/CIS22	IEC/CISPR 22 (1997) & EN 55022 (1998) + A1(2000): Limits and methods of measurement of radio disturbance characteristics of information technology equipment
12/CIS22a	IEC/CISPR 22 (1993) and EN 55022 (1994): Limits and methods of measurement of radio disturbance characteristics of information technology equipment, Amendment 1 (1995) and Amendment 2 (1996)

September 30, 2005

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NVLAP Code	*Designation / Description*
12/CIS22b	CNS 13438 (1997): Limits and Methods of Measurement of Radio Interference Characteristics of Information Technology Equipment
12/EM02a	IEC 61000-3-2, Edition 2.1 (2001-10), EN 61000-3-2 (2000), and AS/NZS 2279.1 (2000): Electromagnetic compatibility (EMC) Part 3-2: Limits - Limits for harmonic current emissions (equipment input current <= 16 A)
12/EM03	IEC 61000-3-3(1995); EN 61000-3-3(1995); AS/NZS 2279.3(1995): EMC - Part 3: Limits - Section 3. Limitation of voltage fluctuations and flicker in low-voltage supply systems for equipment with rated current up to 16A
12/F18	FCC OST/MP-5 (1986): FCC Methods of Measurement of Radio Noise Emissions for ISM Equipment (cited in FCC Method 47 CFR Part 18 - Industrial, Scientific, and Medical Equipment)
12/FCC15b	ANSI C63.4 (2001) with FCC Method 47 CFR Part 15, Subpart B: Unintentional Radiators
12/FCC15c	ANSI C63.4 (2001) with FCC Method 47 CFR Part 15, Subpart C: Intentional Radiators
12/FCC15d	ANSI C63.4(2001) with FCC Method 47 CFR Part 15, Subpart D: Unlicensed Personal Communications Service Devices

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NVLAP Code	*Designation / Description*
12/FCC15e	ANSI C63.4 (2001) with FCC Method 47 CFR Part 15, Subpart E: Unlicensed National Information Infrastructure Service Devices
12/T51	AS/NZS CISPR 22 (2002) and AS/NZS 3548 (1997): Electromagnetic Interference - Limits and Methods of Measurement of Information Technology Equipment
12/VCCIa	Agreement of Voluntary Control Council for Interference by Information Technology Equipment - Technical Requirements: V-3/02.04

Immunity Test Methods:

12/1089a	GR-1089-CORE, Issue 3, October 2002: Electromagnetic Compatibility and Electrical Safety - Generic Criteria for Network Telecommunications Equipment (sections 2, 3.3, and 3.5)
12/160D16	RTCA/DO-160D (1997): Environmental Conditions and Test Procedures for Airborne Equipment - Section 16 - Power Input
12/160D17	RTCA/DO-160D (1997): Environmental Conditions and Test Procedures for Airborne Equipment - Section 17 - Voltage Spike
12/160D18	RTCA/DO-160D (1997): Environmental Conditions and Test Procedures for Airborne Equipment - Section 18 - Audio Frequency Conducted Susceptibility - Power Inputs

September 30, 2005

Effective through

For the National Institute of Standards and Technology

NVLAP-01S (06-01)

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ISO 9002:1994

Scope of Accreditation

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NVLAP Code	*Designation / Description*
12/160D19	RTCA/DO-160D (1997): Environmental Conditions and Test Procedures for Airborne Equipment - Section 19 - Induced Signal Susceptibility
12/160D20	RTCA/DO-160D (1997): Environmental Conditions and Test Procedures for Airborne Equipment - Section 20 - Radio Frequency Susceptibility (Radiated and Conducted)
12/160D22	RTCA/DO-160D (1997): Environmental Conditions and Test Procedures for Airborne Equipment - Section 22 - Lightning Induced Transient Susceptibility
12/160D25	RTCA/DO-160D (1997): Environmental Conditions and Test Procedures for Airborne Equipment - Section 25 - Electrostatic Dischare (ESD)
12/I01	IEC 61000-4-2, Ed. 2.1 (2001), A1, A2; EN 61000-4-2: Electrostatic Discharge Immunity Test
12/I02	IEC 61000-4-3, Ed. 2.0 (2002-03); EN 61000-4-3 (2002): Radiated Radio-Frequency Electromagnetic Field Immunity Test
12/I03	IEC 61000-4-4(1995), A1(2000), A2(2001); EN 61000-4-4: Electromagnetic compatibility (EMC) - Part 4-4: Testing and measurement techniques - Electrical Fast Transient/Burst Immunity Test
12/I04	IEC 61000-4-5, Ed. 1.1 (2001-04); EN 61000-4-5: Electromagnetic compatibility (EMC) - Part 4-5: Testing and measurement techniques - Surge immunity test

September 30, 2005

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NVLAP Code	*Designation / Description*
12/I05	IEC 61000-4-6, Ed. 2.0 (2003-05); EN 61000-4-6: Electromagnetic compatibility (EMC) - Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields
12/I06	IEC 61000-4-8, Ed. 1.1 (2001); EN 61000-4-8: Electromagnetic compatibility (EMC) - Part 4-8: Testing and measurement techniques - Power frequency magnetic field immunity test
12/I07	IEC 61000-4-11, Ed. 1.1 (2001-03); EN 61000-4-11: Voltage Dips, Short Interruptions and Voltage Variations Immunity Tests
12/J111324	SAE J1113/24: Immunity to radiated electromagnetic fields; 10 kHz to 200 MHz - Crawford TEM cell and 10 kHz to 5 GHz - Wideband TEM cell
12/J111341	SAE J1113/41 (1995-07): Limits and methods of measurement of radio disturbance characteristics of components and modules for the protection of receivers used on board vehicles

Radio Test Methods

12/RSS119	RSS-119, Issue 6 (March 25, 2000): Land Mobile and Fixed Radio Transmitters and Receivers, 27.41 to 960 MHz
12/RSS123	RSS-123, Issue 1, Rev. 2 (November 6, 1999): Low Power Licensed Radiocommunication Devices

September 30, 2005

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Scope of Accreditation

ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS

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NVLAP Code	***Designation / Description***
12/RSS125	RSS-125 (March 25, 2000): Land Mobile and Fixed Radio Transmitters and Receivers, 1.705 to 50.0 MHz, Primarily Amplitude Modulated
12/RSS131	RSS-131, Issue 2 (July 2003): Zone Enhancers for the Land Mobile Service
12/RSS132	RSS-132, Issue 1 (August 2002): 800 MHz Cellular Telephones Employing New Technologies
12/RSS133	RSS-133, Issue 2, Rev. 1 (November 6, 1999): 2GHz Personal Communications Services
12/RSS134	RSS-134, Issue 1, Rev. 1 (March 25, 2000): 900 MHz Narrowband Personal Communication Service
12/RSS135	RSS-135, Issue 1 (October 26, 1996): Digital Scanner Receivers
12/RSS136	RSS-136, Issue 5 (October 2002): Land and Mobile Station Radiotelephone Transmitters and Receivers Operating in the 26.960 - 27.410 MHz General Radio Service Band
12/RSS137	RSS-137, Issue 1, Rev. 1 (September 25, 1999): Location and Monitoring Service (902 - 928 MHz)
12/RSS139	RSS-139, Isssue 1 (February 5, 2000): Licensed Radiocommunications Devices in the Band 2400 - 2483.5 MHz

September 30, 2005
Effective through

For the National Institute of Standards and Technology

NVLAP-01S (06-01)

National Institute of Standards and Technology — NVLAP® — National Voluntary Laboratory Accreditation Program

ISO/IEC 17025:1999
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NVLAP LAB CODE 100276-0

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NVLAP Code	*Designation / Description*
12/RSS141	RSS-141, Issue 1 (July 2003): Aeronautical Radiocommunication Equipment in the Frequency Band 117.975 - 137 MHz
12/RSS142	RSS-142, Issue 2 (August 2002): Narrowband Multipoint Communication Systems in the 1,427 - 1,430 MHz and 1,493.5 - 1,496.5 MHz Bands
12/RSS170	RSS-170, Issue 1, Rev. 1 (November 6, 1999): Satellite Mobile Earth Stations
12/RSS191	RSS-191, Issue 2 (August 2002): Local Multipoint Communication Systems in the 28 GHz Band; Point-to-Point and Point-to-Multipoint Broadband Communication Systems in the 24 GHz and 38 GHz Bands
12/RSS192	RSS-192, Issue 1 (November 6, 1999): Fixed Wireless Access Systems in the Band 3400 - 3700 MHz
12/RSS193	RSS-193, Issue 1 (July 2003): Multipoint and Point-to-Point Communication Systems (MCS) in the Fixed Service Operating in the 2,150 - 2,160 MHz, 2,500 - 2,596 MHz and 2,686 - 2,690 MHz Bands
12/RSS210	RSS-210, Issue 5 (November 2001): Low Power Licence-Exempt Radiocommunication Devices
12/RSS212	RSS-212, Issue 1 (February 27, 1999): Test Facilities and Test Methods for Radio Equipment

September 30, 2005
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NVLAP Code	*Designation / Description*
12/RSS213	RSS-213, Issue 1 (April 24, 1999): 2 GHz Licence-Exempt Personal Communications Service Devices (PCS)
12/RSS215	RSS-215, Issue 1 (November 6, 1999): Analogue Scanner Receivers

Telecommunications Test Methods:

12/FCC2a2	TIA/EIA 603A (2001) with 47 CFR Part 2: Public Mobile Services in 47 CFR Part 22
12/FCC2b2	TIA/EIA 603A (2001) with 47 CFR Part 2: Private Land Mobile Radio Services in 47 CFR Part 90
12/FCC2d1	TIA/EIA 603A (2001) with 47 CFR Part 2: Experimental Radio, Auxiliary, Special Broadcast and Other Program Distributional Services in 47 CFR Part 74
12/FCC2e1	TIA/EIA 603A (2001) with 47 CFR Part 2: International Fixed Public Radiocommunication Services in 47 CFR Part 23
12/CIS15c	EN 55015 (2000) + A1 (2001): Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment

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NVLAP Code	*Designation / Description*
MIL-STD-462 : Conducted Emissions:	
12/A13	MIL-STD-462 Version D Method CE101
12/A14	MIL-STD-462 Version D Method CE102
12/A16	MIL-STD-461 Version E Method CE101
12/A17	MIL-STD-461 Version E Method CE102
12/A18	MIL-STD-461 Version E Method CE106
MIL-STD-462 : Conducted Susceptibility:	
12/B12	MIL-STD-462 Version D Method CS101
12/B13	MIL-STD-462 Version D Method CS103
12/B25	MIL-STD-461 Version E Method CS114
12/B26	MIL-STD-461 Version E Method CS115
12/B27	MIL-STD-461 Version E Method CS116

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NVLAP LAB CODE 100276-0

D.L.S. ELECTRONIC SYSTEMS, INC.

NVLAP Code	*Designation / Description*
MIL-STD-462 : Radiated Emissions:	
12/D04	MIL-STD-462 Version D Method RE101
12/D05	MIL-STD-462 Version D Method RE102
12/D06	MIL-STD-462 Version D Method RE103
MIL-STD-462 : Radiated Susceptibility:	
12/E08	MIL-STD-462 Version D Method RS101
12/E09	MIL-STD-462 Version D Method RS103

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For the National Institute of Standards and Technology

NVLAP-01S (06-01)

TABLE OF CONTENTS

i. Cover Page 1
ii. Signature Page 2
iii. NVLAP Certificate of Accreditation 3
iv. NVLAP Scope of Accreditation 4
v. Table of Contents 16
1.0 Summary of Test Report 17
2.0 Introduction 18
3.0 Object 18
4.0 Test Set-Up 18
5.0 Test Equipment 19
6.0 Conducted Emission Measurements 20
7.0 Description of Test Sample 21
8.0 Additional Description of Test Sample 24
9.0 Photo Information and Test Set-Up 25
10.0 Conducted Photos Taken During Testing 26
11.0 Results of Tests 30
12.0 Conclusion 30
TABLE 1 – EQUIPMENT LIST 31
Appendix A – Conducted Data and Charts Taken During Testing 33

1.0 SUMMARY OF TEST REPORT

It was found that the Canopy 5200 AL, Model Number(s) 5200AP, 5200SM, 5200BH, **''meets''** the radio interference conducted emission requirements of the FCC "Rules and Regulations", Part 15, Subpart B, Sections 15.107a for Unintentional Radiators, Class B digital devices. The radiated emissions test was not run.

This test report relates only to the items tested and contains the following number of pages.

Text:	41
Charts:	4

2.0 INTRODUCTION

On April 8, 2005, a series of radio frequency interference measurements was performed on Canopy 5200 AL, Model Number(s) 5200AP, 5200SM, 5200BH, Serial Number: 0A003E01130D. For Class B digital devices the tests were performed according to the procedures of the FCC as stated in the "Methods of Measurement of Radio-Noise Emissions for Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz" found in the American National Standards Institute, ANSI C63.4-2003. These test procedures were performed by personnel of D.L.S. Electronic Systems, Inc. who are responsible to Donald L. Sweeney, Senior EMC Engineer.

3.0 OBJECT

The purpose of this series of tests was to determine if the test sample could meet the radio frequency emission requirements of the FCC Rules and Regulations, Part 15, Subpart B, Sections 15.107a & 15.109a for Unintentional Radiators, Class B digital devices.

4.0 TEST SET-UP

All emission tests were performed at D.L.S. Electronic Systems, Inc. and set up according to the American National Standards Institute, ANSI C63.4-2003, Clause 7, (Figures 10a and 10b). The conducted tests were performed with the test item placed on a non-conductive table (table top equipment), located in the test room.

Equipment normally operated on the floor was tested by placing it on the metal ground plane. The ground plane has an electrical isolation layer over its surface approximately 7mm thick. The power line supplied was connected to a dual line impedance stabilization network electrically bonded to the ground plane, located on the floor. The networks were constructed per the requirements of the American National Standards Institute, ANSI C63.4-2003, Clause 4, (Figure 2).

5.0 TEST EQUIPMENT (Bandwidths and Detector Function)

All preliminary data below 1000 MHz was automatically plotted using the HP Spectrum Analyzer or ESI 26/ESI 40 Fixed Tuned Receiver. The data was taken using Peak, Quasi-Peak or the Average Detector Functions as required. This information was then used to determine the frequencies of maximum emissions. Above 1000 MHz, final data was taken using the Average Detector.

Below 1000 MHz, final data was taken using the HP Spectrum Analyzer and or ESI 26/ESI 40 Fixed Tuned Receiver. These plots were made using the Peak or Quasi-Peak Detector functions, with manual measurements performed on the questionable frequencies using the Quasi-Peak or the Average Detector Function of the Analyzer or ESI 26/ESI 40 Receiver as required. Above 1000 MHz, final data was taken using the Peak Detector on the Spectrum Analyzer.

The bandwidths used are specified by the FCC as stated in the American National Standards Institute, ANSI C63.4-2003, Clause 4.2. From 150 kHz to 30 MHz a bandwidth of 9 or 10 kHz was used and from 30 MHz to 1000 MHz a bandwidth of 120 kHz and above 1000 MHz, a bandwidth of 1 MHz was used.

A list of the equipment used can be found in Table 1. All primary equipment was calibrated against known reference standards with a verified traceable path to NIST.

ion, cables or wires for floor-standing equipment shall be manipulated to the extent possible to produce the maximum level of emissions. For each mode of operation, the frequency spectrum is monitored. Variations in antenna height, antenna polarization, EUT azimuth, and cable or wire placement (each variable within bounds specified elsewhere) are explored to produce the emissions that have the highest amplitude relative to the limit.

6.0 CONDUCTED EMISSION MEASUREMENTS

Conducted emissions were measured over the frequency range from .15 MHz to 30 MHz in accordance with the power line measurements as specified in the American National Standards Institute, ANSI C63.4-2003, Clause 7. The power leads, high (hot) and low (neutral) sides, were measured by connecting the measuring equipment to the appropriate meter terminal of the LISN. During the test, the cables were placed and items moved (when appropriate) to maximize emissions. All signals were then recorded. The allowed levels for Class B digital devices are 66 dBuV decreasing with the logarithm of the frequency to 56 dBuV from .15 MHz to .5 MHz, remaining constant at 56 dBuV from .5 to 5 MHz and than increasing to 60 dBuV between 5 MHz to 30 MHz as stated in Section 15.107a. Average limits are 10 dB lower within the same frequency ranges.

All test measurements were made at a screen room temperature of **69°F** at **35%** relative humidity.

7.0 DESCRIPTION OF TEST SAMPLE: (See also Paragraph 10.0)

7.1 Description:

The Canopy 5200 Advanced Logic Wireless Digital FSK Radio is designed for use in the 5.2GHz Band (5275MHz-5325MHz) with 3 separate 20MHz channels. The radio works in conjunction with a 24vDC power supply. It has a settable output power based on the regulatory requirements with a maximum EIRP of 0.9W. Backhauls can utilize an external reflector which focuses the beam from 60 degrees to 6 degrees. Canopy is a point to multi-point wireless Ethernet distribution system. The back hauls (BH) are point to points connecting multi-point access points to wired Ethernet feeds (Internet Service Providers points of presence, ISP POP).

7.0 DESCRIPTION OF TEST SAMPLE: (CON'T)

7.2 PHYSICAL DIMENSIONS OF EQUIPMENT UNDER TEST

Length: 2.75 inches Width: 8 inches Height: 0.6 inches

7.3 LINE FILTER USED:

N/A

7.4 INTERNAL CLOCK FREQUENCIES:

Switching Power Supply Frequencies:

150 kHz , 132kHz

Clock Frequencies:

20 MHz, 25MHz, 40MHz, 80MHz, 160MHz

7.0 DESCRIPTION OF TEST SAMPLE: (CON'T)

7.5 DESCRIPTION OF ALL CIRCUIT BOARDS:

1. Radio PN: 84-88704-A
2. Power Supply PN: ACPSSW-02
3. Power Supply PN: ACPS110-03

8.0 ADDITIONAL DESCRIPTION OF TEST SAMPLE:
(See also Paragraph 9.0)

1: There were no additional descriptions noted at the time of test.

I certify that the above, combined with paragraph 9.0, describes the equipment tested and that the equipment will be manufactured as stated.

By: _____ _____
Signature Title

For: _____ _____
Company Date

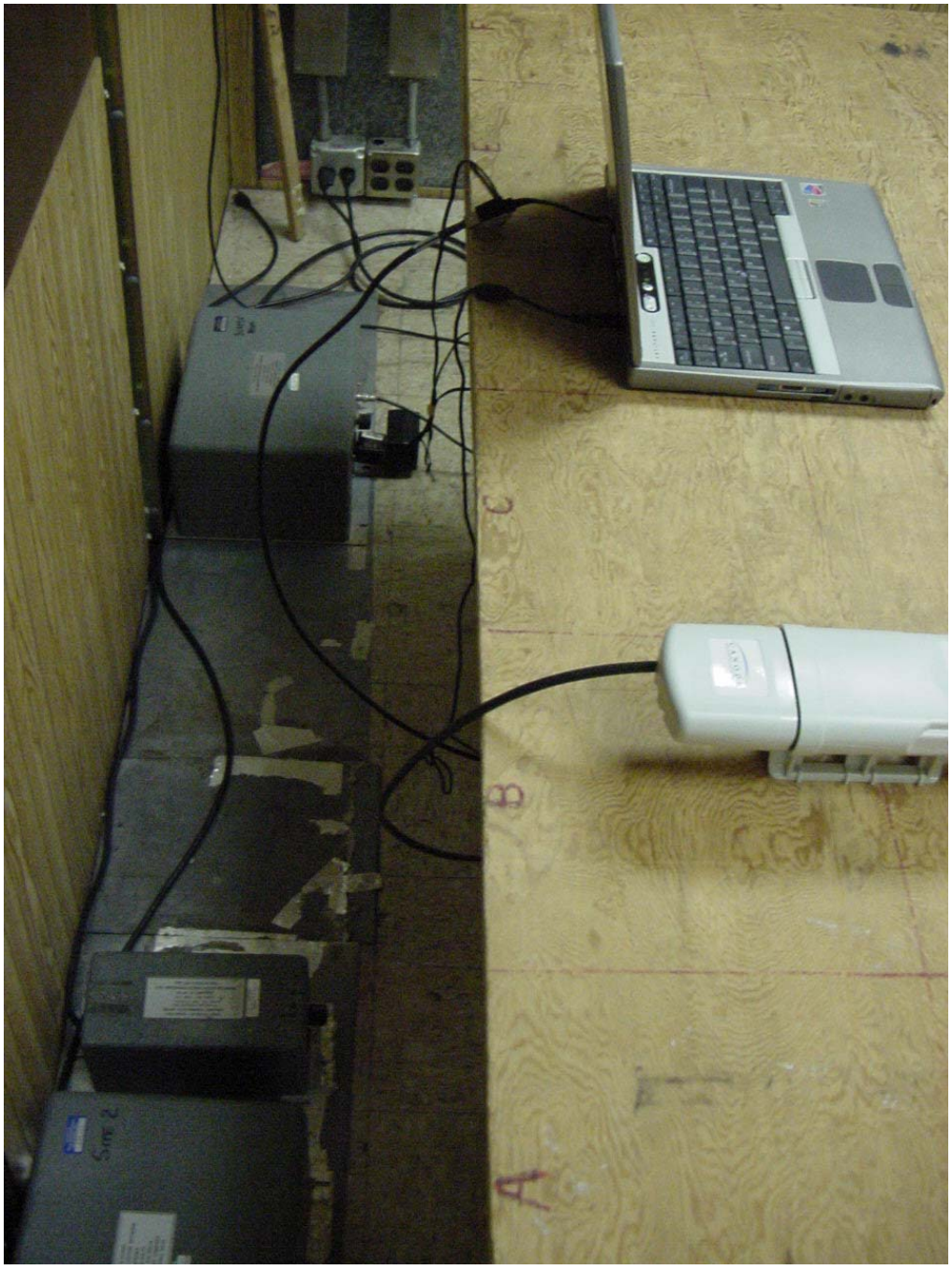
9.0 PHOTO INFORMATION AND TEST SET-UP

Item 0 Canopy 5200 AL
Model Number: 5200AP, 5200SM, 5200BH, Serial Number: 0A003E01130D

Item 1 Shielded Network Power Cable with Metal Shells.

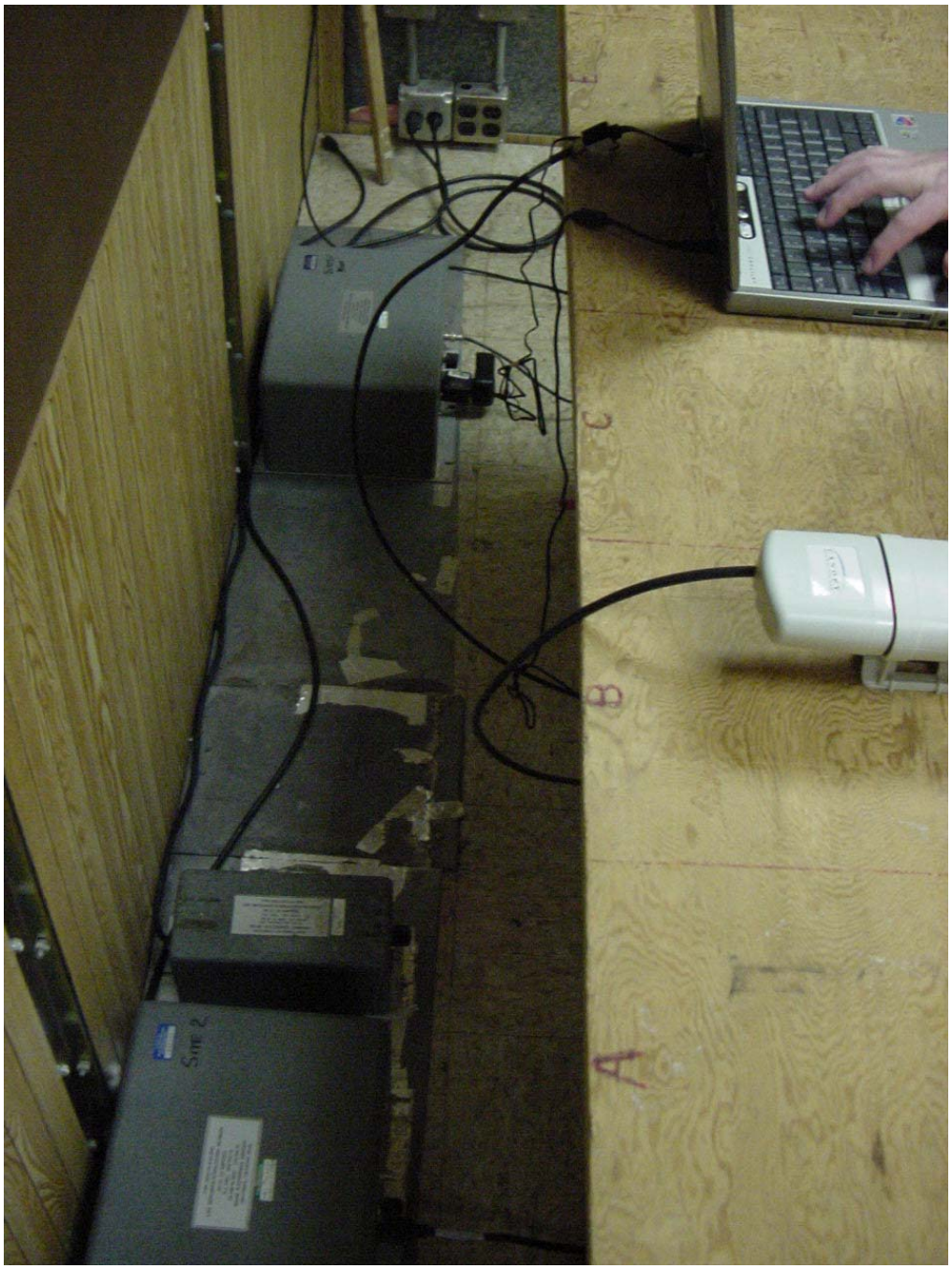
Item 2 Motorola Power Supply Model Number: PSA11R-240, Serial Number I34103427A2

10.0 CONDUCTED PHOTOS TAKEN DURING TESTING



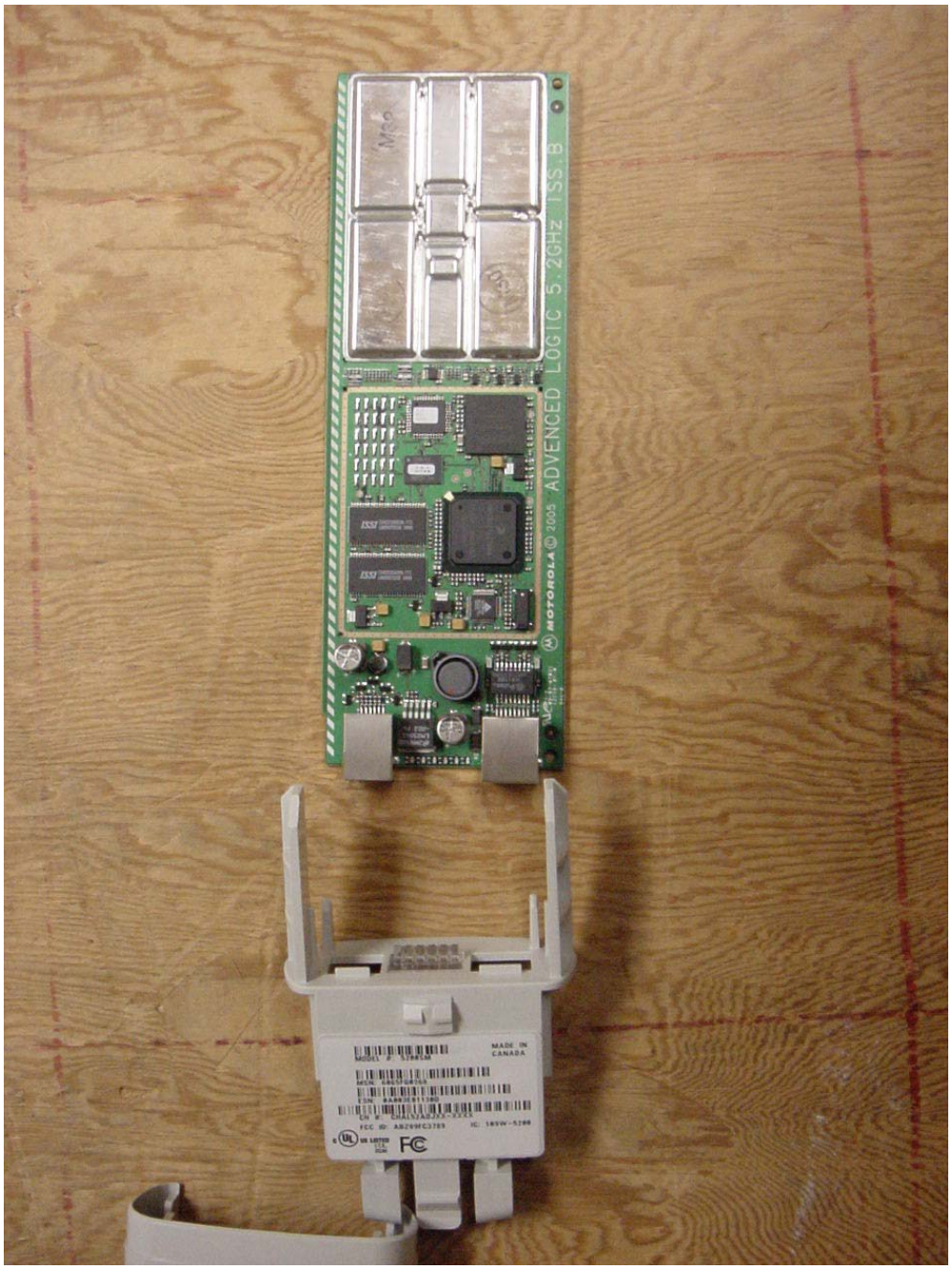
Canopy 5200 – Domestic Supply

10.0 CONDUCTED PHOTOS TAKEN DURING TESTING



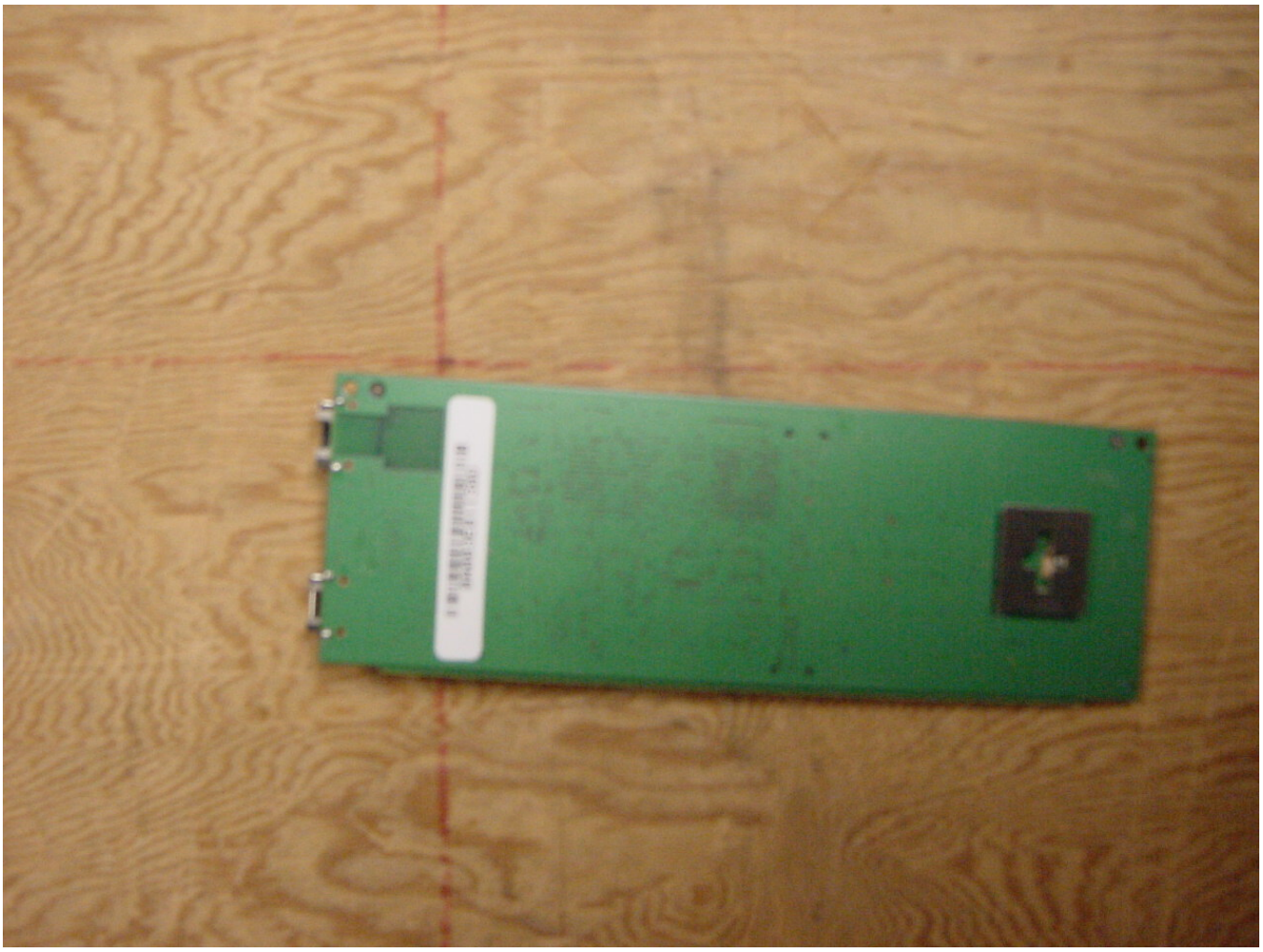
Canopy 5200 – Phihong Supply

10.0 CONDUCTED PHOTOS TAKEN DURING TESTING



Circuit Board - Front

10.0 CONDUCTED PHOTOS TAKEN DURING TESTING



Circuit Board - Back

11.0 RESULTS OF TESTS

The radio interference emission charts results can be seen on the pages at the end of this report. Data sheets indicating the test measurements taken during testing can also be found at the end of this report. Those points on the emission charts shown with a yellow mark are background frequencies which were verified during testing.

12.0 CONCLUSION

It was found that the Canopy 5200 AL, Model Number(s) 5200AP, 5200SM, 5200BH **''meets''** the radio interference conducted emission requirements of the FCC Rules and Regulations, Part 15, Subpart B, Sections 15.107a & 15.109a for Unintentional Radiators, Class B digital devices. The radiated emissions test was not run.

TABLE 1 – EQUIPMENT LIST

Test Equipment	Manufacturer	Model Number	Serial Number	Frequency Range	Cal Due Dates
Spectrum Analyzer	Hewlett/ Packard	8566B	2240A002041	100 Hz – 22 GHz	12/05
Quasi-Peak Adapter	Hewlett/ Packard	85650A	2043A00121	10 kHz – 1 GHz	12/05
Spectrum Analyzer	Hewlett/ Packard	8566B	2421A00452	100 Hz – 22 GHz	9/05
Quasi-Peak Adapter	Hewlett/ Packard	85650A	2043A00450	10 kHz – 1 GHz	9/05
Spectrum Analyzer	Hewlett/ Packard	8591A	3009A00700	9 kHz – 1.8 GHz	3/06
Receiver	Electrometrics	EMC-30	44168	10 kHz – 1 GHz	10/05
Receiver	Rohde & Schwarz	ESI 26	837491/010	20 Hz – 26 GHz	1/06
Receiver	Rohde & Schwarz	ESI 40	837808/006	20 Hz – 40 GHz	10/05
Receiver	Rohde & Schwarz	ESI 40	837808/005	20 Hz – 40 GHz	2/06
Antenna	EMCO	3104C	00054891	20 MHz – 200 MHz	2/06
Antenna	Electrometrics	LPA-25	1114	200 MHz – 1 GHz	2/06
Antenna	EMCO	3104C	00054892	20 MHz – 200 MHz	3/06

All primary equipment is calibrated against known reference standards with a verified traceable path to NIST.

TABLE 1 – EQUIPMENT LIST

Test Equipment	Manufacturer	Model Number	Serial Number	Frequency Range	Cal Due Dates
Antenna	Electrometrics	3146	1205	200 MHz – 1 GHz	3/06
Antenna	EMCO	3104C	97014785	20 MHz – 200 MHz	2/06
Antenna	EMCO	3146	97024895	200 MHz – 1 GHz	2/06
Antenna	EMCO	3115	2479	1 GHz – 18 GHz	4/05
Antenna	EMCO	3115	99035731	1 GHz – 18 GHz	4/05
Antenna	Rohde & Schwarz	HUF-Z1	829381001	20 MHz – 1 GHz	2/06
Antenna	Rohde & Schwarz	HUF-Z1	829381005	20 MHz – 1 GHz	2/06
LISN	Solar	8012-50-R-24-BNC	8305116	10 MHz – 30 MHz	8/05
LISN	Solar	8012-50-R-24-BNC	814548	10 MHz – 30 MHz	8/05
LISN	Solar	9252-50-R-24-BNC	961019	10 MHz – 30 MHz	12/05
LISN	Solar	9252-50-R-24-BNC	971612	10 MHz – 30 MHz	11/05
LISN	Solar	9252-50-R-24-BNC	92710620	10 MHz – 30 MHz	7/05

All primary equipment is calibrated against known reference standards with a verified traceable path to NIST.

APPENDIX A

‘‘CONDUCTED DATA

AND

CHARTS TAKEN DURING TESTING’’

FCC Part 15 Class B

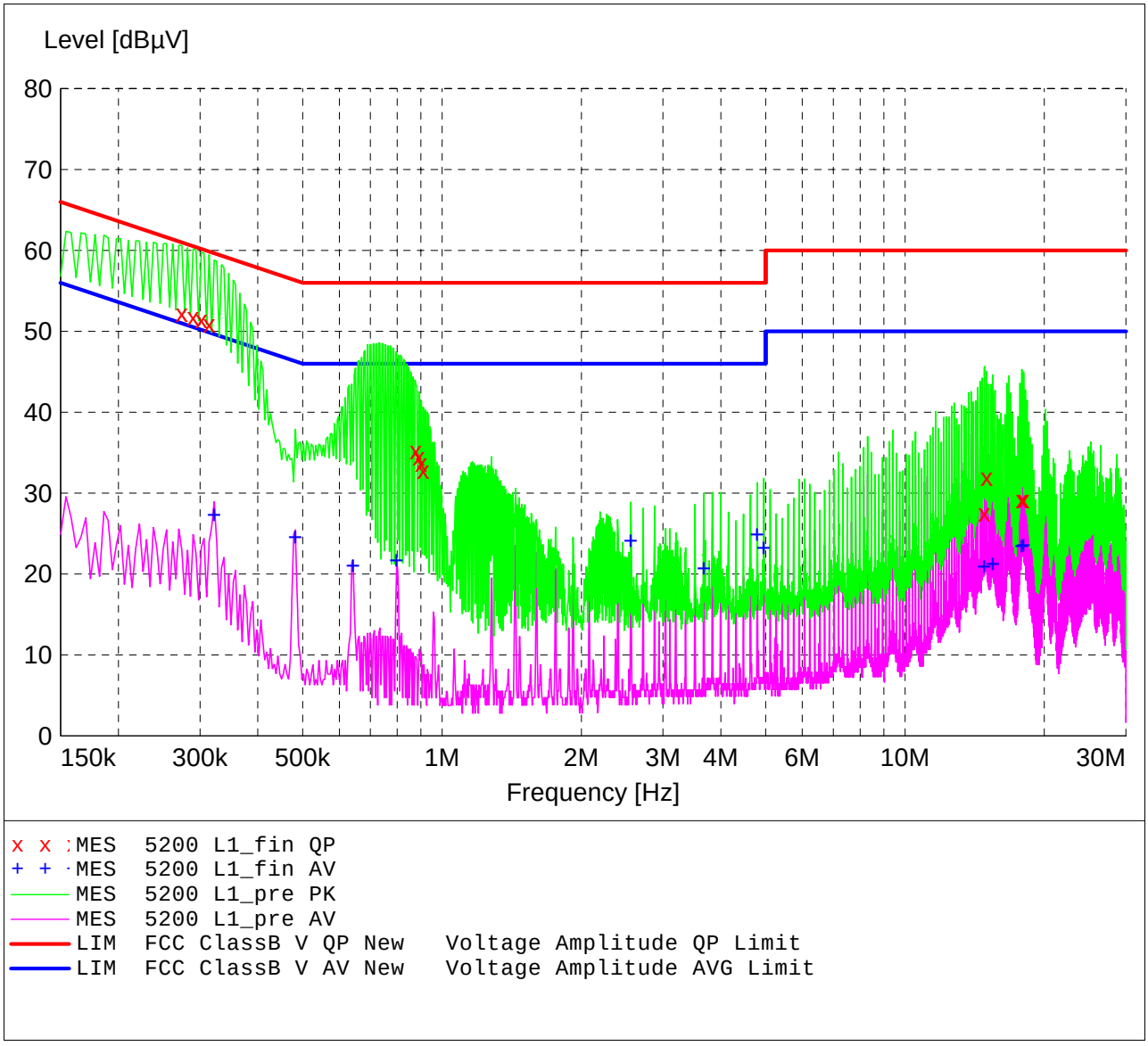
Voltage Mains Test

EUT:	Canopy 5200 iss B
Manufacturer:	Motorola
Operating Condition:	69 deg. F, 35% R.H.
Test Site:	DLS O.F. Screen Room
Operator:	Tim O
Test Specification:	120 VAC @ 60 Hz
Comment:	Line 1
	Date: 04-08-2005

SCAN TABLE: "FCC ClassB Voltage"

Short Description: FCC Class B Voltage

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
150.0 kHz	30.0 MHz	4.0 kHz	MaxPeak Average	10.0 ms	9 kHz	LISN DLS#128



MEASUREMENT RESULT: "5200 L1_fin QP"

4/8/2005 10:11AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.274000	52.20	10.6	61	8.8	---	---
0.290000	51.80	10.5	61	8.7	---	---
0.302000	51.50	10.5	60	8.7	---	---
0.314000	50.90	10.5	60	8.9	---	---
0.878000	35.30	10.3	56	20.7	---	---
0.890000	34.50	10.3	56	21.5	---	---
0.902000	33.70	10.3	56	22.3	---	---
0.910000	32.90	10.2	56	23.1	---	---
14.846000	27.50	10.8	60	32.5	---	---
15.006000	32.00	10.8	60	28.0	---	---
17.874000	29.20	11.0	60	30.8	---	---
18.034000	29.20	11.0	60	30.8	---	---

MEASUREMENT RESULT: "5200 L1_fin AV"

4/8/2005 10:11AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.322000	27.30	10.4	50	22.4	---	---
0.482000	24.60	10.3	46	21.7	---	---
0.642000	21.00	10.3	46	25.0	---	---
0.798000	21.70	10.3	46	24.3	---	---
2.558000	24.10	10.3	46	21.9	---	---
3.678000	20.70	10.4	46	25.3	---	---
4.794000	24.90	10.5	46	21.1	---	---
4.954000	23.30	10.5	46	22.7	---	---
14.842000	20.90	10.8	50	29.1	---	---
15.482000	21.30	10.8	50	28.7	---	---
17.874000	23.50	11.0	50	26.5	---	---
18.034000	23.60	11.0	50	26.4	---	---

FCC Part 15 Class B

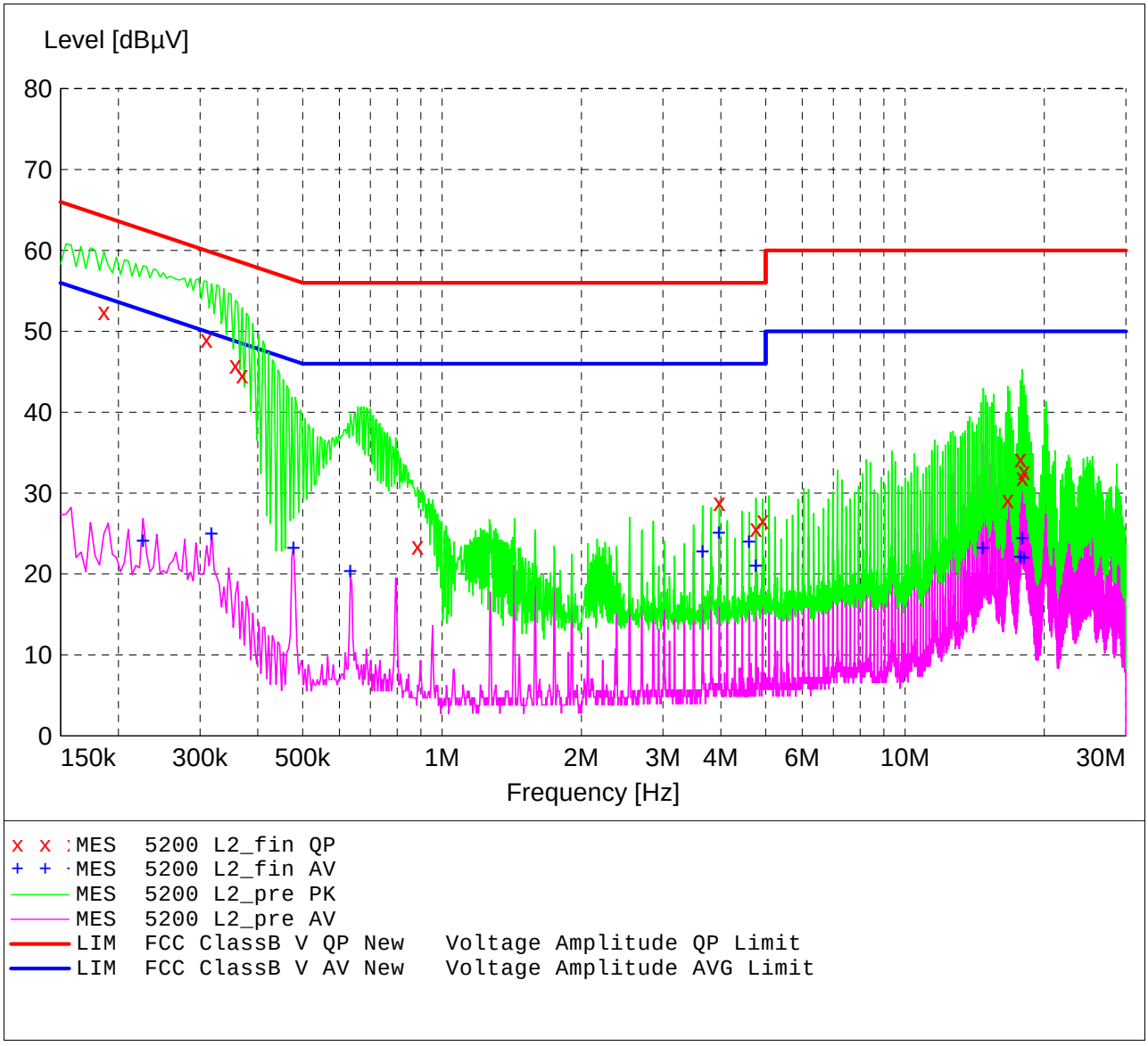
Voltage Mains Test

EUT:	Canopy 5200 iss B
Manufacturer:	Motorola
Operating Condition:	69 deg. F, 35% R.H.
Test Site:	DLS O.F. Screen Room
Operator:	Tim O
Test Specification:	120 VAC @ 60 Hz
Comment:	Line 2
	Date: 04-08-2005

SCAN TABLE: "FCC ClassB Voltage"

Short Description: FCC Class B Voltage

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
150.0 kHz	30.0 MHz	4.0 kHz	MaxPeak Average	10.0 ms	9 kHz	LISN DLS#128



MEASUREMENT RESULT: "5200 L2_fin QP"

4/8/2005 10:18AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.186000	52.50	11.1	64	11.7	---	---
0.310000	49.00	10.5	60	10.9	---	---
0.358000	45.80	10.3	59	13.0	---	---
0.370000	44.60	10.3	59	13.9	---	---
0.886000	23.50	10.3	56	32.5	---	---
3.970000	28.90	10.4	56	27.1	---	---
4.766000	25.70	10.5	56	30.3	---	---
4.926000	26.60	10.5	56	29.4	---	---
16.666000	29.20	10.9	60	30.8	---	---
17.774000	34.30	11.0	60	25.7	---	---
17.934000	31.90	11.0	60	28.1	---	---
18.090000	32.70	11.0	60	27.3	---	---

MEASUREMENT RESULT: "5200 L2_fin AV"

4/8/2005 10:18AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.226000	24.10	10.8	53	28.5	---	---
0.318000	25.00	10.4	50	24.8	---	---
0.478000	23.30	10.3	46	23.1	---	---
0.634000	20.40	10.3	46	25.6	---	---
3.654000	22.80	10.4	46	23.2	---	---
3.970000	25.10	10.4	46	20.9	---	---
4.606000	24.00	10.4	46	22.0	---	---
4.766000	21.00	10.5	46	25.0	---	---
14.762000	23.30	10.8	50	26.7	---	---
17.774000	22.10	11.0	50	27.9	---	---
17.934000	24.50	11.0	50	25.5	---	---
18.090000	22.00	11.0	50	28.0	---	---

FCC Part 15 Class B

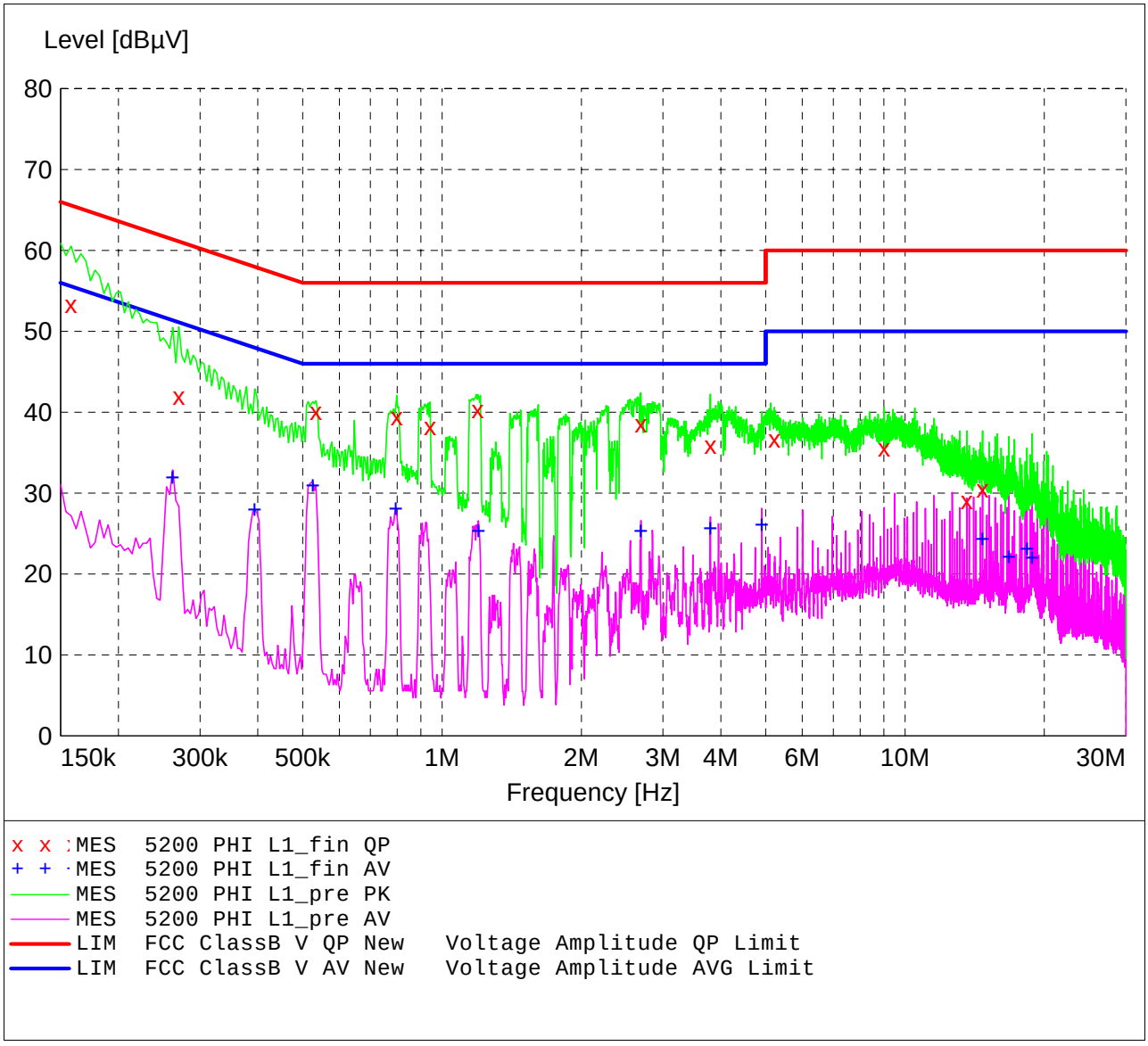
Voltage Mains Test

EUT:	Canopy 5200 iss B
Manufacturer:	Motorola
Operating Condition:	69 deg. F, 35% R.H.
Test Site:	DLS O.F. Screen Room
Operator:	Tim O
Test Specification:	120 VAC @ 60 Hz PHIHONG Supply
Comment:	Line 1
	Date: 04-08-2005

SCAN TABLE: "FCC ClassB Voltage"

Short Description: FCC Class B Voltage

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
150.0 kHz	30.0 MHz	4.0 kHz	MaxPeak Average	10.0 ms	9 kHz	LISN DLS#128



MEASUREMENT RESULT: "5200 PHI L1_fin QP"

4/8/2005 10:34AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.158000	53.40	11.4	66	12.1	---	---
0.270000	42.00	10.6	61	19.1	---	---
0.534000	40.10	10.3	56	15.9	---	---
0.798000	39.40	10.3	56	16.6	---	---
0.942000	38.20	10.2	56	17.8	---	---
1.194000	40.30	10.3	56	15.7	---	---
2.686000	38.60	10.4	56	17.4	---	---
3.798000	35.90	10.4	56	20.1	---	---
5.222000	36.70	10.5	60	23.3	---	---
9.014000	35.60	10.6	60	24.4	---	---
13.602000	29.10	10.8	60	30.9	---	---
14.706000	30.50	10.8	60	29.5	---	---

MEASUREMENT RESULT: "5200 PHI L1_fin AV"

4/8/2005 10:34AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.262000	31.90	10.7	51	19.5	---	---
0.394000	28.00	10.3	48	19.9	---	---
0.526000	31.00	10.3	46	15.0	---	---
0.794000	28.10	10.3	46	17.9	---	---
1.198000	25.30	10.3	46	20.7	---	---
2.690000	25.40	10.4	46	20.6	---	---
3.798000	25.70	10.4	46	20.3	---	---
4.906000	26.10	10.5	46	19.9	---	---
14.706000	24.40	10.8	50	25.6	---	---
16.762000	22.10	10.9	50	27.9	---	---
18.342000	23.10	10.9	50	26.9	---	---
18.818000	22.00	10.9	50	28.0	---	---

FCC Part 15 Class B

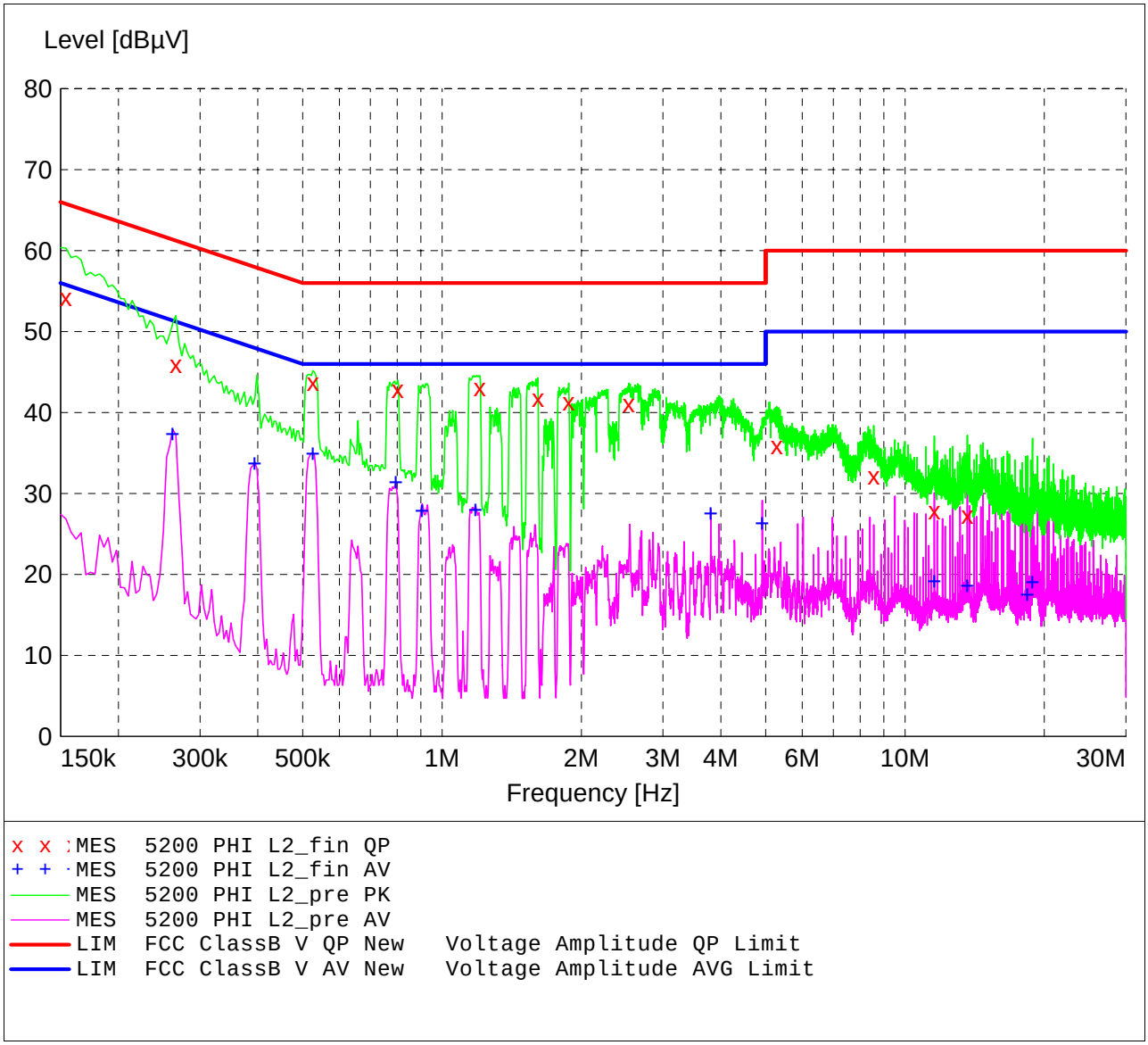
Voltage Mains Test

EUT:	Canopy 5200 iss B
Manufacturer:	Motorola
Operating Condition:	69 deg. F, 35% R.H.
Test Site:	DLS O.F. Screen Room
Operator:	Tim O
Test Specification:	120 VAC @ 60 Hz PHIHONG Supply
Comment:	Line 2
	Date: 04-08-2005

SCAN TABLE: "FCC ClassB Voltage"

Short Description: FCC Class B Voltage

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
150.0 kHz	30.0 MHz	4.0 kHz	MaxPeak Average	10.0 ms	9 kHz	LISN DLS#128



MEASUREMENT RESULT: "5200 PHI L2_fin QP"

4/8/2005 10:28AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.154000	54.20	11.4	66	11.6	---	---
0.266000	45.90	10.6	61	15.4	---	---
0.526000	43.80	10.3	56	12.2	---	---
0.802000	42.90	10.3	56	13.1	---	---
1.206000	43.10	10.3	56	12.9	---	---
1.610000	41.80	10.3	56	14.2	---	---
1.878000	41.30	10.3	56	14.7	---	---
2.530000	41.10	10.3	56	14.9	---	---
5.282000	35.90	10.5	60	24.1	---	---
8.558000	32.20	10.6	60	27.8	---	---
11.570000	27.90	10.7	60	32.1	---	---
13.634000	27.30	10.8	60	32.7	---	---

MEASUREMENT RESULT: "5200 PHI L2_fin AV"

4/8/2005 10:28AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.262000	37.40	10.7	51	13.9	---	---
0.394000	33.70	10.3	48	14.2	---	---
0.526000	34.90	10.3	46	11.1	---	---
0.794000	31.40	10.3	46	14.6	---	---
0.906000	27.90	10.2	46	18.1	---	---
1.182000	28.00	10.3	46	18.0	---	---
3.806000	27.50	10.4	46	18.5	---	---
4.918000	26.30	10.5	46	19.7	---	---
11.570000	19.20	10.7	50	30.8	---	---
13.630000	18.60	10.8	50	31.4	---	---
18.382000	17.50	10.9	50	32.5	---	---
18.858000	19.00	10.9	50	31.0	---	---